1-18. (CANCELED)

19. (NEW) A measuring device for non-stationary radiative and convective heat flux generated in a gaseous fluid (22), notably a highly corrosive gaseous fluid under high pressure and at high temperature, such as a gas from the combustion of propellants, the device comprising a tubular metal body (1) open at two extremities, a low heat-loss isotropic chamber (5) mounted coaxially in an interior of the tubular metal body (1), a detector (20) of the radiative heat flux, fixed within the interior of the isotropic chamber (5), the detector being equipped to deliver an electrical signal representative of the non-stationary radiative and convective heat flux generated within the gaseous fluid (22), a metallic lens (11) designed to pump heat of the gaseous fluid (22) and radiate the heat integrally and instantaneously into the isotropic chamber (5), the lens being mounted on a cap (3) designed to seal one of the two extremities of the tubular metal body (1) and a plug (2) designed to seal a first of the two extremities of the tubular metal body (1), an annular cylindrical space (6) located between the isotropic chamber (5) and the tubular metal body (1) to permit passage of a purging gas (25) circulating in the isotropic chamber (5) and in the annular cylindrical space (6).

20. (NEW) The measuring device according to claim 19, wherein the tubular metal body (1) is equipped with a safety vent (10) discharging into the annular cylindrical space (6) created between the isotropic chamber and the tubular metal body and through which the annular cylindrical space (6) is linked to an exterior to enable discharge of the purging gas (25) in event of over-pressure.

21. (NEW) The measuring device according to claim 19, wherein the cap (3) is mounted in a removable manner on one extremity of the tubular metal body (1).

22. (NEW) The measuring device according to claim 21, wherein the cap (3) has a threaded exterior (18a) designed to operate with an internal thread (18b) cut into one of the two extremities of the tubular metal body (1).

23. (NEW) The measuring device according to claim 19, wherein the cap (3) is equipped with a transverse opening (4) in which the metallic lens (11) is mounted in a manner that one of its faces (12, 13) is in contact with the gaseous fluid (22).

24. (NEW) The measuring device according to claim 19, wherein the detector (20) is affixed to the plug (2),

25. (NEW) The measuring device according to claim 19, wherein the lateral walls of the isotropic chamber (5) are affixed to the plug (2).

26. (NEW) The measuring device according to claim 19, wherein the plug (2) is provided with entry ways (8) and exit ways (9) for the purging gas (25).

27. (NEW) The measuring device according to claim 19, wherein an interior wall (31) of the isotropic chamber (5) is coated with a metallic deposit nap so as to ensure a maximum corpuscular reflection of the radiated heat flux emitted in the chamber (5).

28. (NEW) The measuring device according to claim 19, wherein an external wall (32) of the isotropic chamber (5) is also coated with a metallic deposit so as to reflect parasitic radiation emitted by the tubular metal body (1) in the annular space(6).

29. (NEW) The measuring device according to claim 19, wherein the isotropic chamber (5) is in a cylindrical form and that the detector (20) is affixed according to an axis of the isotropic chamber (5).

30. (NEW) The measuring device according to claim 19, wherein the metallic lens (11) is a high thermometric conductivity body designed to pump the heat flux heat via a face (12) in contact with the gaseous fluid (22), an other face (13) being equipped to instantaneously and integrally radiate the heat flux pumped into an interior of the isotropic chamber (5).

31. (NEW) The measuring device according to claim 30, wherein the face (12) of the lens (11) in contact with the gaseous fluid (22) is coated with a metallic oxide deposit with a high absorption coefficient and resistance to corrosion, the other face (13) being coated with a high emissivity metallic deposit.

32. (NEW) The measuring device according to claim 19, wherein the metallic lens (11) is provided at a periphery with an attachment element (17) by which the lens is attached in a removable manner to one of the two extremities of the metal body (1) by means of the cap (3).

33. (NEW) The measuring device according to claim 30, wherein the metallic lens (11) has a circular part (26) through which the heat flux of the gaseous fluid (22) is pumped and a conical part (27) radiating the heat flux pumped into the isotropic chamber (5), the circular and conical parts (26 and 27) being connected to one another by a small diameter liaison axis (28).

34. (NEW) The measuring device according to claim 33, wherein the circular part (26) of the metallic lens (11) has on of a flat, cylindrical or curved form.

35. (NEW) The measuring device according to claim 33, wherein the conical part (27) of the metallic lens (11) includes a truncated cavity (14) designed to increase an emitting surface.

36. (NEW) The measuring device according to claim 33, wherein the conical part (27) of the metallic lens (11) is full and curved.